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REMARKS

Applicants respond hereby to the outstanding Office Action mailed January 3, 2007, in the above-identified application. The time for responding to the outstanding Office Action is extended one (1) month by the accompanying Petition For Extension of Time. Claims 7, 10, 12, 15 and 17 are amended hereby, and new claim 12 is now presented. Each of claims 7-18 remain pending for prosecution hereinafter, where claims 7, 8, 9, 10, 12, 13, 14, 15 and 17 are the independent claims.

Response To Objection to Title of the Invention

At paragraph [02] of the outstanding Office Action, the Examiner asserts that the title of the invention is not descriptive. In response, applicants have amended the title to: **Capsular Medical System With Wireless Communication**. Applicants respectfully assert that the title as amended is descriptive of the invention, and request that the objection be withdrawn in view of the Title as amended.

Response To Rejection Under 35 USC §112, Second Paragraph

At paragraphs [02], [03] and [04] of the outstanding Office Action, the Examiner rejects claims 10, 11, 15 under 35 USC § 112, Second Paragraph, for indefiniteness. The Examiner asserts that certain scope of the rejected claims, based on particular wording therein, is not clear, and that clarification for the particular wording is not found in the Specification to the Examiner's satisfaction.

In response, applicants have amended independent claims 10 and 15 in order to adjust the particular wording substantially in accordance with the Examiner's comments. After

amendment, independent claims 10 and 15, and claim 11 that depends from claim 10, are believed to render clear the subject matter of the invention, and are patentable. Applicants, therefore, respectfully request the withdrawal of the Second Paragraph rejections of claims 10, 11 and 15.

Response To Rejection Under 35 USC §102

At paragraph [07] of the outstanding Office Action, the Examiner rejects claims 7-17 under 35 USC 102 (a) as anticipated by US pending, published US Patent Application No. 2003/0085994 to Fujita, et al. (Fujita).

At paragraph [08] of the outstanding Office Action, the Examiner asserts that Fujita discloses a capsular medical system comprising a capsular in-body unit ("capsule endoscope 3" [0074]) having a radio communication device ("antenna 23," [0074]) which is inserted or swallowed to be introduced to the body cavity; an extracorporeal device ("external unit 5," [0070]) having a communication device for communication with the in-body unit, which is arranged outside the human body; and at least two antennas (multiple antennas 11a to 11d," [0070]) which are arranged near the body surface to communicate data to the in-body unit connected to the extracorporeal device, the capsular medical system further comprising switching device ("antenna switch 45," [0071]) which switches the antennas; a detecting device ("receiving circuit 33," [0075]) which detects a communication state, and an antenna selecting device ("antenna select circuit 46," [0075]) which detects a receiving strength, in the in-body unit, of signals transmitted from at least two antennas and selects the antenna in a preferable receiving and transmitting state.

Claim 7

At paragraph [09] of the outstanding Office Action, the Examiner asserts with respect to independent claim 7 that applicants' capsular medical system is disclosed by Fujita, as the Examiner set forth at paragraph [08] of the outstanding Office Action, and that the so-disclosed Fujita capsular medical system allegedly "operates its switching device at a switching timing in a communication direction," therefore anticipating independent claim 7.

Applicants have carefully studied Fujita, and independent claim 7, but do not agree with the Examiner's stated position.

Applicants have amended claim 7 to recite that the claimed switching timing is based on the detected communication state, instead of "direction" as filed, to make the claim more clear with respect to US practice. Independent claim 7 as amended recites a capsular medical system including a capsular in-body unit having a radio communication device which is inserted or swallowed to be introduced to the body cavity, an extracorporeal device having a communication device for communication with the in-body unit, which is arranged outside the human body, at least two antennas which are arranged near the body surface to communicate data to the in-body unit connected to the extracorporeal device, a switching device which switches the antennas and a detecting device which detects a communication state, wherein the capsular medical system operates the switching device at a switching timing in accordance with the detected communication state.

Fujita's receiving circuit 33 [0075] is not equivalent to the claim 7 detecting device, nor is Fujita's antenna selecting device 46 [0075] equivalent to the claim 7 switching device (as asserted). The claim 7 detecting device detects a communication state, and the switching

device switches the at least two antennas at a switching timing in accordance with the detected communication state detected by the detecting device.

At page 23 of the applicant's translated Specification, they describe their invention as including the processing circuit block 73, which block includes CPU 81. It is stated therein that CPU 81 controls the recording device 62 and the antenna unit 61. The CPU 81 is said to be connected to a timer 80 to control the operation for detecting the communication state at the time interval set by the timer 80. The operation for detecting the communication state causes the operation for selecting the antenna, which is also performed in accordance with the time interval set by the timer 80. Neither the claim 7 detecting device for detecting the communication state, nor the claim 7 switching device is taught or suggested by Fujita, particularly not by their receiving circuit 33, as asserted by the Examiner.

Applicants, therefore, respectfully request the withdrawal of the rejection of independent claim 7 under Section 102(a) in view of Fujita.

Claim 8

At paragraph [10] of the outstanding Office Action, the Examiner asserts with respect to independent claim 8 that Fujita discloses an antenna selecting device that performs the "operation" at the time interval set by a timer ("sequentially selected," [0073]; "repeated at intervals of proper period of time." [0083]). Applicants respectfully disagrees with the Examiner's stated position.

Applicants' independent claim 8 sets forth a capsular medical system having a capsular in-body unit having a radio communication device which is inserted or swallowed to be introduced to the body cavity; an extracorporeal device having a communication device for

communication with the in-body unit, which is arranged outside the human body; a plurality of antennas which are arranged near the body surface to communicate data to the in-body unit connected to the extracorporeal device; a switching device which switches the antennas; a detecting device which detects a communication state; and an antenna selecting device which detects a receiving strength, in the in-body unit, of signals transmitted from at least two antennas and selects the antenna in a preferable receiving and transmitting state. The antenna selecting device performs the operation at the time interval set by a timer.

The claimed antenna selecting device detects a receiving strength, in the in-body unit, of signals transmitted from at least two antennas and selects the antenna in a preferable receiving and transmitting state, performing the operation at the time interval set by a timer. We understand that the sequential selection of the antennas by Fujita is completely different because it controls antenna selecting by the receiving circuit output using a sequential switching operation, not using a timer, as does applicants' claim 8 invention.

The claimed timer-based antenna-selection operation is not a sequential switching operation, as is Fujita's. Applicants' claimed timer-based antenna selection provides greater flexibility by its use as claimed. Fujita's description at paragraph [83] merely references repeated transmissions of the same data, at proper time intervals, but is not concerned with antenna selection based on state and fixed timer-defined switching.

Applicants, therefore, respectfully request the withdrawal of the rejection of independent claim 8 under Section 102(a) in view of Fujita.

Claim 9

At paragraph [11] of the outstanding Office Action, the Examiner asserts with respect to independent claim 9 that Fujita discloses that its detecting device performs the operation at the time interval set by a timer and when a communication state is deteriorated, the antenna is switched ("the antenna 11i, through which the highest radio wave strength data can be received, must be changes," [0083]).

Applicants have carefully studied Fujita, and claim 9, do not agree with the Examiner's position.

Applicants' independent claim 9 sets forth a capsular medical system having a capsular in-body unit having a radio communication device which is inserted or swallowed to be introduced to the body cavity; an extracorporeal device having a communication device for communication with the in-body unit, which is arranged outside the human body; a plurality of antennas which are arranged near the body surface to communicate data to the in-body unit connected to the extracorporeal device; a switching device which switches the antennas; a detecting device which detects a communication state; and an antenna selecting device which detects a receiving strength, in the in-body unit, of signals transmitted from at least two antennas and selects the antenna in a preferable receiving and transmitting state. The detecting device performs the operation at the time interval set by a timer and, when a communication state is deteriorated, the antenna is switched.

Applicants find that the Examiner's paragraph [11] argument fails to distinguish between the claim 9 detecting device and its antenna-selecting device, which are distinct and separate elements. That is, applicants' claim 9 requires a detecting device, which detects a

communication state, and an antenna-selecting device, which detects a receiving strength, in the in-body unit, of signals, transmitted from at least two antennas to select an antenna in a preferable receiving and transmitting state, and at the time interval set by a timer. When a communication state is deteriorated, the antenna is switched. As made clear in our argument above with respect to claim 7, Fujita does not disclose a detecting device that detects a communication state. Regardless of whether actual antenna choice is based on signal strength, applicants' switching operation before any antenna choices are made is controlled by the detecting device and timer, and so claim 9 is not anticipated by Fujita's antenna 11.

Applicants, therefore, respectfully request the withdrawal of the rejection of claim 9 under Section 102(a) in view of Fujita.

Claim 10

At paragraph [12] of the outstanding Office Action, the Examiner asserts with respect to independent claim 10 that Fujita comprises a number of n antennas whose receiving and transmitting states are checked smaller than a number N of attached antennas when switching the antennas, and it anticipates under 102(a).

Applicants have carefully studied Fujita, and independent claim 10, do not agree with the Examiner's position.

Applicants' independent claim 10 recites a capsular medical system having a capsular in-body unit having a radio communication device which is inserted or swallowed to be introduced to the body cavity; an extracorporeal device having a communication device for communication with the in-body unit, which is arranged outside the human body; a plurality of antennas which are arranged near the body surface to communicate data to the in-body unit

connected to the extracorporeal device; a switching device which switches the antennas; a detecting device which detects a communication state; and an antenna selecting device which detects a receiving strength, in the in-body unit, of signals transmitted from at least two antennas and selects the antenna in a preferable receiving and transmitting state. A number n of antennas whose receiving and transmitting states are detected is less than a number N of all of the attached antennas at the time of antenna switching.

Fujita does not include a detecting device for detecting a communication state, still less a detecting device that controls antenna switching based on a time interval set by a timer (rather than by sequential switching), as stated above in response to the rejection of independent claims 7-9 in view of Fujita. Applicants, therefore, respectfully assert that claim independent 10 is not anticipated by Fujita, and request withdrawal of the claim 10 rejection thereunder.

Claim 11

At paragraph [13] of the outstanding Office Action, the Examiner asserts with respect to dependent claim 11 that Fujita discloses that the antenna whose receiving and transmitting state is checked, and is determined based on the antenna, which currently receives data. In response applicants respectfully assert that claim 11, because it depends from independent claim 10, is patentable for at least the reasons set forth for the patentability of independent claim 10. Applicants, therefore, respectfully request reconsideration and withdrawal of the same claim rejection.

Claim 12

At paragraph [14] of the outstanding Office action, the Examiner asserts with respect to independent claim 12 that Fujita discloses a storing device for storing receiving and transmitting state ("memory 47," [0072]), wherein, when the receiving strength data is not obtained upon operating the antenna selecting device, the antenna which can communicate data is checked is selected to ensure the communication (antenna 11i," as noted above).

Applicants have carefully studied Fujita, and independent claim 12, do not agree with the Examiner's position.

Applicants' independent claim 12 recites a capsular medical system comprising a capsular in-body unit having a radio communication device which is inserted or swallowed to be introduced to the body cavity; an extracorporeal device having a communication device for communication with the in-body unit, which is arranged outside the human body; a plurality of antennas which are arranged near the body surface to communicate data to the in-body unit connected to the extracorporeal device; a switching device which switches the antennas; a detecting device which detects a communication state; an antenna selecting device which detects a receiving strength, in the in-body unit, of signals transmitted from at least two antennas and selects the antenna in a preferable receiving and transmitting state and a storing device for storing the receiving and transmitting state. The receiving strength data is not obtained upon operating the antenna selecting device, the antenna, which can communicate data, is checked and is selected to ensure the communication.

The independent claim 12 language defines that the claimed storing device is for storing the receiving and transmitting state, where if the receiving strength data is not

obtained upon operating the antenna selecting device, the antenna that can communicate data is checked is selected to ensure the communication. Fujita's memory 47, as distinguished, is for storing received data from receiving circuit 33. Fujita does not include the limitation for use of its memory 47 that "if the receiving strength data is not obtained upon operating the antenna selecting device, the antenna that can communicate data is checked is selected to ensure the communication." Hence, and for at least the reasons set forth above for the patentability of independent claims 7-9 and 10, in view of Fujita, claim 12 is not unpatentable under Section 102(a). Applicants, therefore, respectfully request the withdrawal of the claim 12 rejection under Section 102(a) in view of Fujita.

Claim 13

At paragraph [15] of the outstanding Office Action, the Examiner asserts with respect to independent claim 13 that Fujita discloses the antenna-selecting device that operates at the time interval set by the timer, referring to the above rejections.

Applicants have carefully studied Fujita, and independent claim 13, do not agree with the Examiner's position.

Applicants independent claim 13 recites a capsular medical system comprising a capsular in-body unit having a radio communication device which is inserted or swallowed to be introduced to the body cavity, an extracorporeal device having a communication device for communication with the in-body unit, which is arranged outside the human body, a plurality of antennas which are arranged near the body surface to communicate data to the in-body unit connected to the extracorporeal device, a switching device which switches the antennas, a detecting device which detects a communication state and an antenna selecting device which

detects a receiving strength of a signal transmitted from the in-body unit by at least two antennas and selects the antenna in a preferable receiving and transmitting state. The antenna selecting device operates at the time interval set by a timer.

Fujita does not disclose timer control of switching, nor do they disclose a detecting circuit, as asserted above in response to the claim 8 rejections in view of Fujita. That is, the sequential selection of the antennas by Fujita is completely different because it controls antenna selecting by the receiving circuit output using a sequential switching operation, not using a timer, as does applicants' claim 8 invention.

Applicants, therefore, respectfully request reconsideration and withdrawal of the claim 13 rejection in view of Fujita.

Claim 14

At paragraph [16] of the outstanding Office Action, the Examiner asserts with respect to independent claim 14 that Fujita discloses a detecting device that performs the operation at the time interval set by the timer, and switches when a deteriorated state is detected, the Examiner referring to his prior arguments for preceding claims.

Applicants have carefully studied Fujita, and independent claim 14, do not agree with the Examiner's position.

Applicants' independent claim 14 recites a capsular medical system comprising a capsular in-body unit having a radio communication device which is inserted or swallowed to be introduced to the body cavity; an extracorporeal device having a communication device for communication with the in-body unit, which is arranged outside the human body; a plurality of antennas which are arranged near the body surface to communicate data to the in-body unit

connected to the extracorporeal device; a switching device which switches the antennas; a detecting device which detects a communication state; and an antenna selecting device which detects a receiving strength of a signal transmitted from the in-body unit by at least two antennas and selects the antenna in a preferable receiving and transmitting state. The detecting device performs the operation at the time interval set by a timer and, when a communication state is deteriorated, the antenna is switched.

The independent claim 14 language requires that the detecting device detect a communication state, and that the antenna-selecting device detect a receiving strength in the in-body unit of signals transmitted from at least two antennas to select an antenna in a preferable receiving and transmitting state, and at the time interval set by a timer. When a communication state is deteriorated, the antenna is switched. As made clear in our argument above with respect to independent claims 7 and 9, Fujita does not disclose a detecting device that detects a communication state. Regardless of whether actual antenna choice is based on signal strength, applicants' switching operation before any antenna choices are made is controlled by the detecting device and timer, and so independent claim 14 is not anticipated by Fujita's antenna 11.

Applicants, therefore, respectfully request the withdrawal of the rejection of independent claim 14 in view of Fujita under Section 102(a).

Claim 15

At paragraph [17] of the outstanding Office Action, the Examiner asserts with respect to independent claim 15 that Fujita discloses having a number n of antennas whose receiving

and transmitting states are checked smaller than a number N of attached antennas when switching the antennas.

Applicants have carefully studied Fujita, and independent claim 15, and do not agree with the Examiner's position.

Applicants' independent claim 15 sets forth a capsular medical system comprising a capsular in-body unit having a radio communication device which is inserted or swallowed to be introduced to the body cavity; an extracorporeal device having a communication device for communication with the in-body unit, which is arranged outside the human body; a plurality of antennas which are arranged near the body surface to communicate data to the in-body unit connected to the extracorporeal device; a switching device which switches the antennas; a detecting device which detects a communication state; and an antenna selecting device which detects a receiving strength of a signal transmitted from the in-body unit by at least two antennas and selects the antenna in a preferable receiving and transmitting state. A number n of antennas whose receiving and transmitting states are detected is less than a number N of all attached antennas at the time of antenna switching.

Fujita does not include a detecting device for detecting a communication state, still less a detecting device that controls antenna switching based on a time interval set by a timer (rather than by sequential switching), as stated above with respect to the applicants' arguments to overcome the rejection of claims 7-10 in view of Fujita. Applicants, therefore, respectfully assert that independent claim 15 is not anticipated by Fujita, and request withdrawal of the independent claim 15 rejection thereunder.

Claim 16

At paragraph [18] of the outstanding Office Action, the Examiner asserts with respect to dependent claim 16 that Fujita discloses that the antenna whose receiving and transmitting state is checked is determined based on the antenna, which currently receives data. In response applicants respectfully assert that claim 16, because it depends from claim 15, is patentable for at least the reasons set forth for the patentability of independent claim 15. Applicants, therefore, respectfully request reconsideration and withdrawal of the same claim rejection.

Claim 17

At paragraph [19] of the outstanding Office action, the Examiner asserts with respect to independent claim 17 that Fujita discloses that when data on the receiving strength is not obtained upon operating the antenna selecting device the antenna that can communicate data is checked is selected to ensure the communication (antenna 11i," as noted above).

Applicants have carefully studied Fujita, and independent claim 17, and do not agree with the Examiner's position.

Applicants' independent claim 17 sets forth a capsular medical system having a capsular in-body unit having a radio communication device which is inserted or swallowed to be introduced to the body cavity; an extracorporeal device having a communication device for communication with the in-body unit, which is arranged outside the human body; a plurality of antennas which are arranged near the body surface to communicate data to the in-body unit connected to the extracorporeal device; a switching device which switches the antennas; a

detecting device which detects a communication state; an antenna selecting device which detects a receiving strength of a signal transmitted from the in-body unit by at least two antennas and selects the antenna in a preferable receiving and transmitting state and a storing device for storing the receiving and transmitting state. When data on the receiving strength is not obtained upon operating the antenna selecting device, the antenna that can communicate data is checked and is selected to ensure the communication.

The claim 17 language defines that the claimed storing device is for storing the receiving and transmitting state, where if the receiving strength data is not obtained upon operating the antenna selecting device, the antenna that can communicate data is checked is selected to ensure the communication. Independent claim 17 is patentable in view of the fact that Fujita's memory 47 is not slated for maintaining or storing a communication or "transmitting and receiving" state, but for storing received data from receiving circuit 33, and for at least the reasons set forth above for the patentability of independent claims 7-10 and 12, in view of Fujita. Applicants, therefore, respectfully request the withdrawal of the claim 17 rejection under Section 102(a) in view of Fujita.

Claim 18

Newly presented dependent claim 18 sets the capsular medical system of independent claim 7, but further qualifying that the detecting device selects one of the at least two antennas arranged to communicate data to the in-body unit connected to the extracorporeal device, via the switching device, in response to a detected communication state corresponding to movement of the capsular in-body unit in the body cavity. Applicants respectfully assert that new claim 18 is patentable in view of Fujita for at least the reasons set forth above herein.

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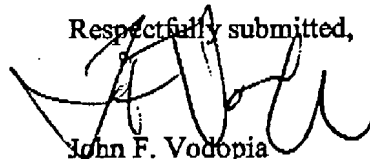
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Conclusion

Applicants respectfully assert, therefore, that each of pending claims 7-18 are patentable under 35 USC § 102(a) in view of Swanson for at least the reasons mentioned, and therefore request withdrawal of the rejection of claims 7-18 in view of Fujita thereunder. Accordingly, applicants urge the Examiner to reconsider and withdraw the rejection of claims 7-17, to allow those claims as well as newly presented claim 18 in view of Fujita, and allow the application to issue.

If the Examiner believes that a telephone conference with applicants' attorneys would be advantageous to the disposition of this case, the Examiner is asked to telephone the undersigned.

Respectfully submitted,



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